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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/071,491	02/07/2002	Roland Faber	P02,0023	1867

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PATENT DEPARTMENT  
6600 SEARS TOWER  
CHICAGO, IL 60606-6473

EXAMINER
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PATEL, KANJIBHAI B

ART UNIT	PAPER NUMBER
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2625

DATE MAILED: 10/20/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. ✓ 10/071,491	Applicant(s) FABER ET AL.	
	Examiner Kanjil Patel	Art Unit 2625	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 07 February 2002.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/23/02 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>4/22/02</u> . | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Priority*

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### *Drawings*

2. The drawings are objected to because of the following informalities:

IN Figure 1, block 2, change " Selection of the parameters/parameters " to --  
Selection of the **parameter**/parameters --.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

**Claims 1-20** are rejected under 35 U.S.C.102(e) as being anticipated by Wu et al. (US 6,700,374 B1).

**For claims 1 and 11**, Wu et al. disclose a method for operating a medical imaging examination apparatus (Figure 1) comprising the steps of:

sequentially acquiring measured signals from an examination subject (at least column 2, lines 48-53; magnetic resonance imaging system provides signals when patient's brain region is examined as shown in Figure 1);

processing said measured signals in an image computer (Figure 1) to obtain image data signals from said measured signals, representing at least one image for use in making a diagnosis relative to said examination subject (at least column 4 line 30 to column 5 line 15);

setting a predetermined, diagnosis-specific parameter representing a criterion for image quality of said at least one image (column 2 line 53 to column 3 line 25);

Art Unit: 2625

automatically electronically analyzing said at least one image to determine whether said at least one image has an image quality which satisfies said parameter (column 3, lines 44-49);

if said at least one image has an image quality which satisfies said parameter, ending acquisition of said measured signals (column 3, lines 22-25); and

if said at least one image has an image quality which does not satisfy said parameter, acquiring further measured signals until an image having an image quality which satisfies said parameter is obtained (column 3, lines 1-25).

**For claims 2 and 12**, Wu et al. disclose a method as claimed in claim 1 comprising setting a continuation limit and aborting said continued acquisition of said measured signals if said continuation limit is exceeded without an image being obtained having an image quality which satisfies said parameter (column 5, lines 16-45).

**For claims 3 and 13**, Wu et al. disclose a method as claimed in claim 2 comprising setting a time span as said continuation limit (column 7, lines 36-53).

**For claims 4 and 14**, Wu et al. disclose a method as claimed in claim 2 comprising setting a predetermined number of unsuccessful attempts to obtain an image having an image quality which satisfies said parameter, as said continuation limit (column 7, lines 36-53).

**For claims 5 and 15**, Wu et al. disclose a method as claimed in claim 1 comprising employing a parameter representing contrast in said at least one image as said parameter representing a criterion for image quality (column 7, lines 15-19).

**For claims 6 and 16,** Wu et al. disclose a method as claimed in claim 5 wherein said at least one image has two image regions having respective grey scale values, and comprising employing a parameter defining a relationship of the respective grey scale values of said two image (Figure 4; column 7, lines 54-60) regions as said parameter representing contrast in said at least one image (column 7, lines 9-21).

**For claims 7 and 17,** Wu et al. disclose a method as claimed in claim 1 wherein said image computer generates an image data signal containing said image data (column 4, lines 30-55), and comprising setting a predetermined further parameter related to said image data signal, and automatically electronically analyzing said at least one image to determine whether both said parameter representing a criterion for image quality and said further parameter are satisfied, and wherein the step of ending said measured signal acquisition comprises ending said measured signal acquisition only if both of said parameter representing a criterion for image quality and said further parameter are satisfied, and wherein the step of continuing acquisition of said measured signals comprises continuing acquisition of said measured signals until an image is obtained having an image quality which satisfies said parameter representing a criterion for image quality and an image data signal which satisfies said further parameter (column 6 line 49 to column 7 line 53).

**For claims 8 and 18,** Wu et al. discloses a method as claimed in claim 7 wherein said image data signal has a waveform having a signal amplitude, signal edges each having a slope, and a waveform width, and comprising selecting said further parameter

as a parameter defining at least one of said amplitude, said slope, and a ratio of said amplitude to said waveform width (Figures 2A-2B).

**For claims 9 and 19,** Wu et al. disclose a method as claimed in claim 1 wherein said image computer generates a plurality of images from said measured signals, and comprising the additional steps of: checking image stability by automatically electronically analyzing at least two of said plurality of images to identify a change of said parameter between said at least two images (Figure 4); setting a change limit and automatically electronically determining whether said change exceeds said change limit, and wherein the step of ending said measured signal acquisition comprises ending said measured signal acquisition if said parameter is satisfied and said change limit is not exceeded, and wherein the step of continuing to acquire measured signals comprises continuing to acquire said measured signals if said change limit is exceeded until at least two further images are obtained wherein said change limit is not exceeded (column 6 line 49 to column 7 line 63).

**For claims 10 and 20,** Wu et al. disclose a method as claimed in claim 1 wherein the step of acquiring measured signals from said examination subject comprises acquiring nuclear magnetic resonance signals from said examination subject as said measured signals (Figure 1).

**Other prior art cited**

4. The prior art cited and not relied upon is considered pertinent to applicant's disclosure.

Kobayashi (US 5,577,095) discloses a medical examination apparatus.

Wu et al. (US 6,700,374 B1) disclose an EPI calibration method to minimize ghosting in reconstructed images.

Kuth et al. (US 5,436,563) disclose a magnetic resonance imaging apparatus.

Pearlman (US 6,121,775) discloses MRI imaging method and apparatus.



### **Contact Information**

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kanji Patel whose telephone number is (571) 272-7454. The examiner can normally be reached on Monday to Thursday from 8 a.m. to 6:30 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bhavesh Mehta, can be reached on (571) 272-7453. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kanji Patel  
Art Unit 2625  
10/15/05

  
**KANJIBHAI PATEL**  
**PRIMARY EXAMINER**